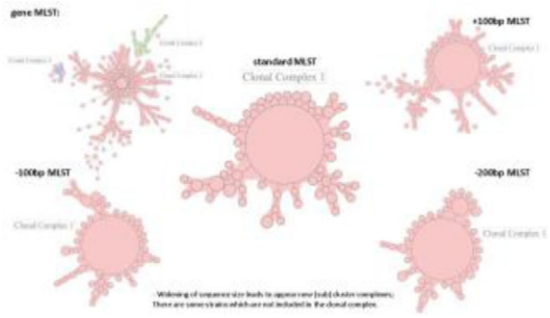

Conclusion: Artificial methods of subspecies typing gives a relative picture of the genetic relationship and clonal structure of microorganisms.

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In silico comparison of different PFGE and wgMLST

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Background: Pulsed field gel electrophoresis (PFGE) is acknowledged to be the 'gold standard' for the typing of strains of a number of bacterial species, including E. coli, and is used widely in clinical settings (van Belkum A., 2007).

Methods & Materials: In silico PFGE analysis of 138 complete E.coli genomes using classical XbaI and 5 other enzymes (Sse8647I, ApaI, AclN, SrfI and SdiI) have been performed by Geneious (Biomatter). Images with gel pattern have been analyzed by TotalLab 1D (Nonlinear Dynamics) to produce band matrix. wgMLST scheme with 2216 loci have created with SeqSpere (Ridom). Discriminatory power and concordance between different PFGE and wgMLST have been estimated based on Simpson and adj.Rand and Wallace indices.

Results: 138 genomes of E.coli have been used to produce different PFGE and wgMLST patterns. Sites of restriction, band (loci) numbers and discriminatory power are presented in Table 1.

Enzymes for PFGE	adj.Rand	WallacewgMLST ->PFGE	WallacePFGE -> wgMLST
XbaI	0.809	1	0.737
Sse8647I	0.816	0.998	0.749
ApaI	0.818	0.998	0.75
AclN	0.821	1	0.751
SrfI	0.808	0.998	0.738
SdiI	0.805	1.0	0.741

The concordance between different PFGEs and wgMLST calculated on cluster complex is presented in Table 2.

Conclusion: PFGE using different restriction enzymes, which have different site restriction and produce different number (27-130) of band, have not shown the advance in discriminatory power and concordance with wgMLST.

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Hemophagocytic Lymhohistiocytosis(HLH) secondary to infections- Experiance at a tertiary care centre

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Background: **Background:** Hemophagocytic Lymphohistiocytosis (HLH) is a rare potentially life-threatening disorder characterized by immune dysregulation, overwhelming immune activation and inflammation. This condition can occur as primary or secondary to infections, autoimmune diseases and malignancies. HLH secondary to infections is an important clinical entity especially in tropical countries. We report our experience of HLH from our hospital.

Methods & Materials: **Materials and Methods:** This is a retrospective analysis of clinical information of patients presented to our hospital between March 2012 and November 2015. All fulfilled the revised criteria of HLH 2004. ackground:white'> This condition can occur as primary or secondary to infections, autoimmune diseases and malignancies. HLH secondary to infections is an important clinical entity especially in tropical countries. We report our experience of HLH from our hospital.

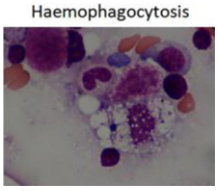
Results: **Results:** Total 5 cases were segregated with secondary HLH diagnosis. The mean age at diagnosis was 34 years (with a

Table 1

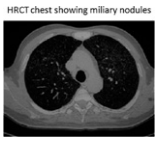
Enzyme	Recognition sequence	Median of band number	95%CI	#different types	Discriminatory index	Confidence interval (95% CI)
XbaI	TĈTAGA	39	27-51	131	0.999	[0.998 - 1.0]
Sse8647I	AGĜWCCT	73	57-104	131	0.999	[0.998 - 1.0]
ApaI	GGGCCĈ	77	62-130	132	0.999	[0.998 - 1.0]
AclN	AĈTAGT	79	53-95	129	0.999	[0.998 - 1.0]
SrfI	GCCCĜGGC	51	41-65	131	0.999	[0.998 - 1.0]
SdiI	GGCCNNNNNĜGCC	38	31-66	129	0.999	[0.998 - 1.0]
wgMLST	2216 loci	-	-	129	0.999	[0.998 - 1.0]

range of 28 to 50 years). All were males. All patients presented with prolonged fever, hepatomegaly and/or splenomegaly. All of them had at least a bi- or trilineage cytopenia, elevated liver enzymes, hyperferritenemia and hypertrygliceridemia. Four out of five patients had hypofibrinogenemia and hemophagocytosis in bone marrow.

The cause of HLH in our series included scrub typhus-1, military tuberculosis-1, enteric fever-1, HIV infection-1 and septecemia-1. All of them received treatment for underlying primary infection along with supportive care. One patient received steroids for HLH. Four patients expired due to multi-organ dysfunction and one recovered.



Histiocyte engulfing blood cells



HRCT chest showing miliary nodules

Conclusion: **Conclusions:** HLH associated with infections, may resolve with treatment of the underlying infection, and their early recognition is important as they may mimic malignancy. All patients meeting the criteria for HLH should undergo initial tests to diagnose the underlying infecting organism. The mortality rates in adults are high due to delayed diagnosis and multiorgan involvement. A high index of suspicion especially in patients with unresolving fever and persistant cytopenias and elevated ferritin helps in early diagnosis, prompt initiation of treatment and improved outcome.

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Hemophagocytic lymphohistiocytosis (HLH) secondary to tropical infections-experience at a tertiary care centre

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[3] *Nizams institute of medical sciences, Hyderabad, India*

Background: Hemophagocytic Lymphohistiocytosis (HLH) is a rare potentially life-threatening disorder characterized by immune dysregulation, overwhelming immune activation and inflammation. This condition can occur as primary or secondary to infections, autoimmune diseases and malignancies. HLH secondary to infections is an important clinical entity especially in tropical countries. We report our experience of HLH from our hospital.

Methods & Materials: This is a retrospective analysis of clinical information of patients presented to our hospital between March 2012 and November 2015. All fulfilled the revised criteria of HLH 2004 and inflammation. This condition can occur as primary or secondary to infections, autoimmune diseases and malignancies. HLH secondary to infections is an important clinical entity especially in tropical countries. We report our experience of HLH from our hospital.

Results: Total 5 cases were segregated with secondary HLH diagnosis. The mean age at diagnosis was 34 years (with a range of 28 to 50 years). All were males. All patients presented with prolonged fever, hepatomegaly and/or splenomegaly. All of them had at least a bi- or trilineage cytopenia, elevated liver enzymes, hyperferritenemia and hypertrygliceridemia. Four out of five patients had hypofibrinogenemia and hemophagocytosis in bone marrow.

The cause of HLH in our series included scrub typhus-1, military tuberculosis-1, enteric fever-1, human immunodeficiency virus(HIV) infection -1 and Septecemia – 1. All of them received treatment for underlying primary infection along with supportive care. One patient received steroids for HLH. Four patients expired due to multi-organ dysfunction and one recovered.